UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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June 7, 2007

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Fort Benning Directorate of Public Works
Environmental Management Division
Meloy Hall (Building 6), Room 310
Fort Benning, Georgia 31905

SUBJECT: Draft Environmental Impact Statement for BRAC 2005 and Transformation Actions at Fort Benning, Georgia; CEQ Number 20070155

Dear Mr. Brent:

The U.S. Environmental Protection Agency (EPA) has reviewed the referenced Draft Environmental Impact Statement (EIS) in accordance with its responsibilities under Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The U.S. Department of the Army (Army) proposes to implement several actions related to the reorganization and overall military transformation process at Fort Benning in Chattahoochee and Muscogee Counties, Georgia, and Russell County, Alabama. The specific interrelated actions that form the basis for this EIS include: 1) Base Realignment and Closure (BRAC) 2005 recommendations; 2) Army Modular Force (AMF) transformation activities; 3) Global Defense Posture Realignment (GDPR) actions related to relocation of overseas assets; and 4) other personnel movements.

Fort Benning consists of approximately 181,275 acres of federally-owned land south and east of Columbus, Georgia, and south of Phenix City, Alabama, on the banks of the Chattahoochee River. Virtually all of the training facilities and 93 percent of the total land area is in Georgia, with the remaining land (~12,000 acres) in Alabama. Currently, there are approximately 16,800 military personnel, 9,400 students (daily average or the number of students being trained on any one day, based on annual attendance), and 7,600 civilian employees stationed at Fort Benning. The total personnel gain at Fort Benning due to the proposed transformation actions would be approximately 14,069, including 4,486 military, 8,357 students, and 1,226 civilian employees

Infrastructure development under the proposed action would occur within the four cantonment areas of Fort Benning (Main Post, Harmony Church, Kelley Hill, and Sand Hill) and training ranges. In general, development to support transformation activities include: headquarters buildings/facilities supporting administrative and operational functions; numerous barracks complexes to house Armor School student trainees; instructional/training classroom facilities; vehicle maintenance instruction facilities; vehicle maintenance shops; motor pools; and wash stands. To support the increased Fort Benning population, utility, road, and communication systems would be upgraded or built depending on the facility location; the existing hospital would be replaced; dental and medial clinics built; and some existing health facilities expanded. Child

development centers will be established to meet increased pre- and elementary-school population, as well as a physical fitness center, chapel, lodging, and dining facilities.

In the Draft EIS, the Army considered three alternatives. The no action alternative consists of an analysis of Fort Benning's operations in November 2005. The two action alternatives (Alternatives A and B) include similar development in the cantonment areas, with the exception of an interchange in Harmony Church. The primary difference between Alternatives A and B is the location of proposed training areas on Fort Benning. Alternative A includes expansion of existing ranges in the northern portion of the base; whereas, Alternative B includes development of a new, heavy maneuver training area in the southern portion of the base. The Army identifies Alternative B as the preferred alternative.

Based on our review of the Draft EIS, EPA has environmental concerns associated with the proposed action. The overall area of disturbance associated with Alternative B is approximately 19,100 acres, compared to 10,741 acres for Alternative A, which does not include development of the Good Hope Maneuver Area. Development activities have the potential to directly and/or indirectly affect approximately 1,228 acres of aquatic habitats, 329 acres of wetlands, water quality associated with clearing operations and construction, and the development of new stream/wetland crossings. In addition, this project would adversely affect several federal- and state-listed endangered, threatened and sensitive species. EPA also has concerns that the expansion of training operations associated with this proposal may increase impacts beyond Fort Benning's boundaries, particularly related to potential changes in air quality and noise exposure. EPA recommends several actions that Fort Benning could implement during construction and long term operations to assist the Columbus metropolitan area in meeting air quality standards in the future. EPA supports a comprehensive monitoring program to ensure that the ongoing impacts from military training are assessed and appropriately addressed/mitigated once identified.

EPA rates the Draft EIS EC-2 (Environmental Concerns-with more information requested). Enclosed are definitions of EPA ratings. Also enclosed are specific review comments which provide greater detail regarding the environmental concerns, additional information requested, and EPA recommendations to address these concerns. We appreciate the opportunity to review the proposed action and are prepared to assist you in implementing any of the measures, described in our comments, to help in addressing the potential impacts of the proposed action. Feel free to contact me at (404) 562-9611 or Ben West of my staff at (404) 562-9643 if you have any questions or want to discuss our comments further.

Sincerely,

John B. Hamilton, Acting

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

Enclosures

U.S. ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL IMPACT STATEMENT (EIS) RATING SYSTEM CRITERIA

EPA has developed a set of criteria for rating Draft EISs. The rating system provides a basis upon which EPA makes recommendations to the lead agency for improving the draft.

RATING THE ENVIRONMENTAL IMPACT OF THE ACTION

- LO (Lack of Objections): The review has not identified any potential environmental impacts requiring substantive changes to the preferred alternative. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposed action.

- EC (Environmental Concerns): The review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact.

- EO (Environmental Objections): The review has identified significant environmental impacts that should be avoided in order to adequately protect the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). The basis for environmental objections can include situations:

  1. Where an action might violate or be inconsistent with achievement or maintenance of a national environmental standard;
  2. Where the Federal agency violates its own substantive environmental requirements that relate to EPA's areas of jurisdiction or expertise;
  3. Where there is a violation of an EPA policy declaration;
  4. Where there are no applicable standards or where applicable standards will not be violated but there is potential for significant environmental degradation that could be corrected by project modification or other feasible alternatives; or
  5. Where proceeding with the proposed action would set a precedent for future actions that collectively could result in significant environmental impacts.

- EU (Environmentally Unsatisfactory): The review has identified adverse environmental impacts that are of sufficient magnitude that EPA believes the proposed action must not proceed as proposed. The basis for an environmentally unsatisfactory determination consists of identification of environmentally objectionable impacts as defined above and one or more of the following conditions:

  1. The potential violation of or inconsistency with a national environmental standard is substantive and/or will occur on a long-term basis;
  2. There are no applicable standards but the severity, duration, or geographical scope of the impacts associated with the proposed action warrant special attention; or
  3. The potential environmental impacts resulting from the proposed action are of national importance because of the threat to national environmental resources or to environmental policies.

RATING THE ADEQUACY OF THE ENVIRONMENTAL IMPACT STATEMENT (EIS)

- 1 (Adequate): The Draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

- 2 (Insufficient Information): The Draft EIS does not contain sufficient information to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the Draft EIS, which could reduce the environmental impacts of the proposal. The identified additional information, data, analyses, or discussion should be included in the Final EIS.

- 3 (Inadequate): The Draft EIS does not adequately assess the potentially significant environmental impacts of the proposal, or the reviewer has identified new, reasonably available, alternatives, that are outside of the spectrum of alternatives analyzed in the Draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. The identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. This rating indicates EPA's belief that the Draft EIS does not meet the purposes of NEPA and/or the Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised Draft EIS.

Draft Environmental Impact Statement for BRAC 2005 and Transformation Actions at Fort Benning, Georgia

SPECIFIC EPA REVIEW COMMENTS

Environmental Justice

The Draft EIS does not include a detailed analysis of the potential for disproportionately high and adverse human health or environmental effects of this project on minority and/or low-income populations. The EIS includes a limited examination of impacts to potential environmental justice (EJ) communities by analyzing demographic and economic data in the affected counties and "region of influence" (ROI) comparing it to the statewide averages. EPA recommends that NEPA documents include general screening protocols to identify potential EJ areas by comparing the minority and low-income characteristics of smaller geographic areas (project area) with those of a larger geographic area (reference area). By using multi-county averages as the ROI and project area, the analysis in the Draft EIS does not accurately identify the potential for impacts to EJ communities immediately adjacent to Fort Benning. Therefore, EPA recommends that the Final EIS evaluates the potential environmental impacts to low-income and minority communities using census information from the 2000 U.S. Census at the block group and block level. The block group data level should be used because it provides the best combination of demographic accuracy and data accessibility. The appropriate reference area could be either the statewide average or perhaps the five-county ROI. EPA also recommends some additional field work to verify some conclusions using the census data. Field verification should include an assessment of impacts (e.g., noise exposure) to identified residences within low-income and minority communities, instead of relying on percentages of block groups or other mapping units and should assist in quantifying the potential for disproportionate impacts to these communities.

Traffic

The Draft EIS states that, "Concurrently to the preparation of this EIS, the Installation is conducting the Fort Benning Comprehensive Traffic Study. This study will make recommendations for the Installation's transportation investments that would result in better operation as well as capacity expansion to accommodate future growth. However, since these projects are not funded yet, they are not included as part of the present analysis." The Draft EIS concludes that there would be severe traffic impacts resulting from implementation of either Alternative A or B. However, it is unclear if completion of projects identified in the Comprehensive Traffic Study or at the end of Section 4.5 will adequately mitigate the negative impacts of additional traffic, since they do not appear to be included in the analysis. Based on the significant increase in numbers of intersections that are failing (LOS E or F), EPA has concerns about localized carbon monoxide (CO) hot-spots that would be created as a result of the proposed action.

EPA's primary concern is the lack of any discussion of consideration of alternative transportation management strategies for Fort Benning to address the transportation system

deficiencies that will be created by the transformation actions. For example, the Draft EIS describes limited existing on-base and off-base mass transit options for Fort Benning employees. Currently there is only one bus route serving Fort Benning every 90 minutes. Given the potential designation of the Columbus area as nonattainment for the fine particulate matter standard (see Air Quality comments below), EPA recommends that Fort Benning develop a comprehensive alternative transportation program, especially for commuters. This program should promote telecommuting, the use of mass transit, and car pooling, and establishing no-cost or low-cost mass transit (possibly hybrid electric or natural gas powered) between popular points on the base and in the Columbus area. This initiative could be similar to those programs developed by other military installations, such as Fort Bragg and Camp Pendelton. By providing useable and convenient alternatives to driving through the installation, these installations have made significant steps towards helping the areas maintain or improve air quality and improve level-of-service problems at key intersections by decreasing the expected traffic demand. This type of program would benefit the environment while simultaneously providing a benefit for many in the Fort Benning community.

Solid Waste

The Draft EIS states that all Fort Benning sanitary waste is transported to a state-permitted transfer station in Phenix City and then sent to a landfill operated by Waste Management. The capacity of this landfill is unknown. It also does not appear that there are any acceptable on-base landfills. The Draft EIS concludes that the solid waste generated by the proposed action "would be within the capacity of the existing waste collection and disposal system." The information in the Draft EIS does not support this conclusion, and EPA recommends that the Final EIS provide additional information to describe how the additional solid waste will be appropriately handled after full build-out from the proposed action.

Noise

Section 4.7 discusses the ongoing noise impacts of various training activities at Fort Benning. The section includes a depiction of various noise zones based on average noise levels associated with different training activities. In several instances, it appears these noise zones extend outside of the boundaries of Fort Benning. The Draft EIS identifies a 400 percent increase in off-Post land areas within Zone II and other areas where annoyance levels might approach those typically found within Zone II. Zone II is described as generally incompatible with noise sensitive land uses, such as residences. The Draft EIS does not contain any maps depicting these residences or quantification of the numbers of impacts to these areas. In addition, there is no discussion of the magnitude and frequency of any historical noise complaints from the surrounding communities that have been collected as part of the noise complaint monitoring system described in the Draft EIS.

EPA recommends that the Final EIS include a more thorough discussion of the noise impacts of continuing operations, specifically related to monitoring of past noise complaints and identification of affected adjacent communities. EPA also recommends that any residences exposed to noise levels within the 65+ day-night average sound level (DNL) contours (Zone II)

be acquired from willing seller residents to help mitigate such noise exposure. EPA supports development of land use plans and ordinances for lands outside Fort Benning to limit possible future complaints from developers and or businesses not compatible with Fort Benning's operations. EPA suggests that Fort Benning continue to utilize the noise complaint system for affected residents to report any noise complaints or other incidents. Also, EPA recommends that periodic noise monitoring occur with such a frequency to determine any expansion ("creep") of the noise contours over time and possible incorporation of additional residences.

The Draft EIS also identifies that a number of noise sensitive land uses on-base (e.g., residences, hospital, and child development center) will be exposed to incompatible noise levels in Zones II and III. The site for the proposed trainee barracks would be partially within Zone III, and the site for the proposed new hospital would be partially within Zone II. EPA's primary recommendation would be to relocate these noise sensitive receptors outside of these incompatible noise zones as part of the final siting and design process. However, EPA understands the land use constraints for siting alternatives based on existing and future training requirements. Therefore, EPA recommends that the Army strongly consider the use of sound-proofing and other sound insulation measures in new building construction to reduce interior noise levels and minimize the impacts of noise exposure in these noise sensitive sites, especially for the new hospital, child development centers, and chapel. Including these measures as part of new construction would likely be less expensive than retrofitting the same buildings at a later point in time.

Air Quality

Section 4.8 of the Draft EIS considers only criteria air pollutants and potential impacts of the National Ambient Air Quality Standards (NAAQS). Criteria pollutants are important, affecting air quality over a large region. However, the Draft EIS does not address hazardous air pollutants or "air toxics" which can cause cancer and other serious health effects among people living or working in the vicinity of the sources. The Fort Benning transformation will involve mobile sources (transportation, training, construction, and service vehicles), area sources, and indoor sources that will emit air toxics in the vicinity of significant numbers of people who work, live, attend school or day care facilities, or are hospitalized at Fort Benning. Area and mobile sources contribute significantly to the nationwide risk from breathing outdoor sources of air toxics, according to EPA's National-Scale Air Toxics Assessment for 1999 (the most recent assessment available - visit http://www.epa.gov/ttn/atw/nata1999). Indoor sources of air toxics are particularly important, given that people spend about 90 percent of their time indoors, leading to long exposure times. Therefore, EPA recommends that the Final EIS address ways to reduce or mitigate the impact of these emissions on people.

EPA published a final rule in February addressing the control of hazardous air pollutants from mobile sources. That rule provides new standards for exhaust and evaporative emissions from passenger vehicles, new limits on the benzene content of gasoline, and standards for portable fuel containers that will reduce emissions of toxics from gas cans that can be found in many garages. Details concerning this rule can be found in the Federal Register, Volume 72, Number 37, February 26, 2007, Page 8428. Looking beyond these regulations, there are

numerous actions that Fort Benning could take to reduce exposures from mobile sources. For example, Fort Benning could establish anti-idling policies for trucks; retrofit diesel engines to reduce emissions; require that all construction diesels be retrofitted; and promote alternative transportation management options.

Area sources are the numerous, smaller sources that support populations, for example gas stations, dry cleaners, vehicle refinishing shops and paint stripping operations, electroplating shops, hospital sterilizers, incinerators, solvent cleaners, boilers, medical waste incinerators, and many others. Some area sources are already covered by regulations; others will soon be subject to regulations. Several suggestions for reducing emissions from area sources are included in Healthy Air – A Community and Business Leaders Guide (http://www.epa.gov/air/toxicair/guide.html). Many of the suggestions in this book could not only reduce emissions of air toxics, but also improve efficiency and cut costs.

Indoor sources of air toxics are particularly significant because the typical person spends 90 percent of his/her time indoors. EPA notes that all vertical building construction projects starting in Fiscal Year 2008 will be LEED certified. Will indoor environmental quality be a priority in these buildings or does the Army expect most of the LEED score for the buildings to be based on other aspects of the building design and construction? EPA recommends that structures built under the transformation actions meet the LEED standards for neighborhood development, where appropriate (http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148). EPA also suggests that the Army consult EPA's Indoor Air Quality website (www.epa.gov/iaq) for suggestions on how to reduce indoor pollution sources.

The Draft EIS discusses the new fine particulate matter ($PM_{2.5}$) standard of 35 ug/cubic meter, but indicates that actions will be taken only if the area does not meet the NAAQS in 2010. Instead, EPA recommends that Fort Benning assist the Columbus metropolitan area to prevent violations of the $PM_{2.5}$ standard by implementing several actions during construction and long term operations associated with the transformation activities. Examples of actions that could be undertaken include:

- Develop a phased initiative to switch all non-tactical vehicles to run on biodiesel. Changes to 20 percent biodiesel/ultra-low sulfur diesel (ULSD) blend can reduce $PM_{2.5}$ emissions by up to 30 percent. In addition, biodiesel has the additional benefits of a linear decrease in polyaromatic hydrocarbon (PAH) emissions (air toxics) and a decrease in toxicity. B100 fuel does not require DOT hazardous material designations.
- Establish policies that all construction equipment operated on the installation shall operate on a minimum of B20 fuel. These policies will help decrease the emissions from construction related activity that will occur during the crucial air quality period prior to official designations of attainment/nonattainment in 2010. EPA recommends that this should be done prior to the letting of construction contracts in order for these potential costs to be included in bid specifications (at current rates B20 is cheaper than ULSD in some areas).
- Develop construction bid specifications that require contractors to use diesel equipment that meets a minimum Tier 2 designation or retrofit existing equipment to achieve a minimum of 20 percent reduction in $PM_{2.5}$ emissions.

- Develop a comprehensive alternative transportation program (see previous comments on traffic).

The Draft EIS discusses that new boilers may remain exempt from permitting requirements. While this may be the case, $PM_{2.5}$ emissions are the primary winter-time pollution problem and since the boilers are operating during that period, they can have an impact that should be addressed. Any diesel boiler can operate on biodiesel (fuel grades B5-B100) and $PM_{2.5}$ emissions would be significantly reduced. EPA recommends consideration of using biodiesel fuel for any diesel boilers on the installation including but not limited to the new hospital boiler. This should serve to not only decrease $PM_{2.5}$ emissions, but should decrease PAH emissions and ensure a healthy civilian and enlisted work force. Furthermore, use of B100 fuel would decrease the storage requirements due to the characteristics of B100. This would also decrease sulphur emissions significantly since B100 contains very little sulphur.

Appendix E contains the detailed air quality impacts assessment and calculations. Based on our review of this Appendix, it appears that the mobile source emissions were based on emissions factors derived from the CARB EMFAC 2002 mobile emissions model, which utilizes California vehicle-based emissions only. The vehicles modeled in EMFAC 2002 are California emission-rated vehicles which are not available in the rest of the United States. EPA recommends that the Final EIS should use the MOBILE vehicle emission factor model to calculate mobile source emissions. Otherwise, these emissions may be underestimated. It is also unclear how much of the increased traffic associated with operations is accounted for in the Draft EIS. With all of the additional training sites, how will the soldiers get to the locations? Are the vehicle emissions and traffic patterns accounted for in this appendix?

Overall, the Draft EIS indicates that if the Columbus area is designated nonattainment for $PM_{2.5}$, then the installation would have to reevaluate its emission control efforts in 2010 or 2011. Based on our series of comments, EPA proposes a different approach for Army consideration. Since substantial transformation activity may be occurring during the compliance monitoring period for the next round of nonattainment designations, Fort Benning has the opportunity to proactively implement some strategies that can reduce particulate pollution. EPA recommends that Fort Benning consider and implement all reasonable and appropriate measures to reduce/prevent emissions from the construction and operation activities thus facilitating the area's efforts to retain its attainment status.. Our staff stands ready to assist Fort Benning in implementing reasonable and appropriate measures to mitigate for the potential air quality impacts of the proposed action.

Hazardous and Toxic Materials/Wastes

The Draft EIS states that radon, "...tends to occur more commonly in the western and midwestern parts of the U.S." and "...will typically concentrate in airtight buildings and particularly in basements." These statements are somewhat misleading as elevated radon levels can be found across the nation and in many parts of Georgia; in airtight structures as well as in buildings with more traditional air exchange rates; and in buildings with basements, crawl spaces, and in slab-on-grade construction. Elevated radon concentrations can even be found in

high-rise buildings. The distribution of radon levels varies according to many factors. EPA recommends a continuation of the requirement to measure radon levels in newly constructed Army facilities and periodic testing of homes for harmful levels of radon.

Wetlands/Water Quality Impacts

The Draft EIS does not identify any specific alternatives considered for range and non-range project locations to avoid or minimize impacts to jurisdictional waters of the United States. Furthermore, the precise locations of project siting, within the cantonment and training range areas, may change following finalization of design and issuance of the Record of Decision. As the overall project continues into later design phases, EPA recommends consideration of design modifications, as appropriate, to further minimize the impacts of individual projects to jurisdictional waters, including wetlands.

The Draft EIS states that wetland permits and possible mitigation activities will be defined prior to construction of any projects affecting jurisdictional wetlands in accordance with the regulatory requirements of the U.S. Army Corps of Engineers (USACE). EPA reiterates that any land clearing operations involving vegetation removal with mechanized equipment such as front-end loaders, backhoes, or bulldozers with sheer blades, rakes or discs in wetlands; or windrowing of vegetation, land leveling, or other soil disturbances are considered placement of fill material in wetlands. Any unavoidable wetland impacts should preferably be mitigated within the same watershed to result in no net loss of aquatic functions, not just wetland acreage. Although we understand the final mitigation plans cannot be prepared until later in the design process, EPA recommends that Fort Benning should consider potential mitigation needs for the different alternatives.

EPA has concerns about degradation of water quality in various waterways from sediment and other pollutants. The Draft EIS identifies potential impacts resulting from erosion of disturbed soils. Soil loss and soil erosion could greatly increase due to extensive land clearing and construction activities. Cut and fill activities and construction equipment usage, specifically heavy earth-moving equipment, could result in soil loss due to wind erosion and soil compaction. All appropriate steps should be taken to address potential impacts to water quality within streams and wetlands. Mitigation measures related to protection of water quality should be tailored depending on the condition of the specific water resource as well as the severity of the potential impacts. Specifically, those waterbodies not currently meeting their designated uses should receive additional protection to ensure that water quality problems are not exacerbated. Monitoring commitments should be included to ensure that water quality and in-stream habitat are fully protected. Stormwater controls (*e.g.*, silt fences and hay bales) should be monitored and replaced periodically for the duration of construction and maintained to help ensure success. Specific comments on the proposed mitigation and monitoring plan are included below.

Monitoring

Appendix G describes the proposed mitigation and monitoring plan for actions associated with this Draft EIS. EPA supports the need for a comprehensive monitoring program to ensure

that the ongoing impacts from military training are assessed and appropriately addressed/ mitigated once identified. However, Sections 4.1.2 and 4.1.3 also describe important monitoring and adaptive management protocols that are currently not listed in Appendix G. The Draft EIS states that, "Another tool used to manage resources and to minimize impacts to the environment (associated with training and operations) is the Integrated Training Area Management (ITAM) program." It is unclear what additional aspects of this program would be potentially incorporated into Fort Benning's current and proposed monitoring protocols. However, EPA supports adoption of the ITAM program for Fort Benning as well as on-the-ground damage inspections followed by damage assessments and repair to assist in developing long-term mitigation for continuing operations. EPA also supports implementation of the specific Best Management Practices (BMPs) identified in the Draft EIS. These practices should be applied and adequately enforced to attain appropriate results.